

CHAPTER 20

PERSONAL PROTECTIVE EQUIPMENT

2001. Discussion and Policy

a. The best means of protecting personnel from hazard exposure in the workplace is to eliminate the hazard. When this is not possible, engineering controls shall be the method of choice to eliminate or minimize hazard exposure in the workplace. When neither of these methods can be employed, activities shall implement a personal protective equipment (PPE) program to reduce or eliminate personnel exposure to hazards.

b. Navy policy is that activities provide, use and maintain PPE when competent authority determines that its use is necessary and that such use will lessen the likelihood of occupational injuries and/or illnesses. Activities shall provide necessary protective equipment where there is a reasonable probability that the use of the equipment will prevent or reduce the severity of injuries or illnesses. PPE procurement and enforcement of proper use and maintenance is the responsibility of the activity.

c. Activities must recognize that personal protective devices do nothing to reduce or eliminate the hazard itself. They merely establish a last line of defense, and any equipment breakdown, failure or misuse immediately exposes the worker to the hazard. Many protective devices, through misapplication or improper maintenance, can become ineffective without the knowledge of the wearer and can have potentially serious consequences. For this reason, proper equipment selection, maintenance, employee training (including equipment limitations) and mandatory enforcement of equipment use are key elements of an effective PPE program.

2002. Basic Program Requirements

Each activity shall ensure that an assessment of all workplaces is conducted to determine if hazards are present that necessitate the use of PPE. If such hazards are present, or likely to be present, activities shall accomplish the following actions:

a. Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment.

b. Communicate selection decisions to each affected employee.

c. Document that the required workplace hazard assessment has taken place with a written certification, identifying the workplace evaluated, the person performing the evaluation and the date(s) of the hazard assessment. Activities shall retain this document as proof of hazard assessment.

NOTE:

Reference 20-1 contains an example of procedures that would comply with the requirement for a hazard assessment.

2003. Equipment Specifications and Requirements

All personal protective clothing and equipment shall be of safe design and construction for the work to be performed. Federal agencies and standards organizations have developed standards and specifications for the design and use of PPE and devices. Activities shall only use those items that have been recognized and approved. This approval can be met through the use of:

- a. Federal specifications
- b. American National Standards Institute (ANSI) specifications
- c. Recognized approval authority, such as Underwriter's Laboratories (UL), Factory Mutual (FM), or American Society of Testing and Materials (ASTM).

2004. Eye and Face Protection

Employees shall wear approved eye and face protection when there is a reasonable probability that wearing such equipment will prevent injury. They shall use eye protection at all times in a designated eye hazard area. Flying particles and chips; splashes from liquids such as acids, caustics and solvents; and operations that generate hot slag or molten metal, welding glare, etc., can cause eye and/or face injury. The activity shall provide the required approved protective equipment and enforce usage. Reference 20-2 provides the requirements for design, construction, testing and use of devices for eye and face protection. Chapter 19 of this manual contains additional information on the Navy Occupational Safety and Health (NAVOSH) sight conservation program.

2005. Hearing Protection

See chapter 18 for hearing protection requirements.

2006. Respiratory Protection

See chapter 15 for respiratory protection requirements.

2007. Head Protection

Helmets and hats for the protection of Navy employees from the impact of falling and flying objects and from limited electric shock and burn shall meet the specifications of reference 20-3. Employees shall wear head protection at all times in a designated hardhat area.

2008. Foot Protection

- a. Foot Hazardous Operations. Foot and toe hazardous operations are those that have a high incidence of, or potential for, foot or toe injuries. Examples of trades or ratings generally associated with foot or toe hazardous operations are construction, materials handling, maintenance, transportation, ship repair and operation, aircraft overhaul and repair and explosives manufacturing and handling. Employees shall wear foot and toe protection at all times in a designated foot hazard area.

b. Foot Protective Devices

(1) Safety shoes, with a built-in protective toe box, primarily provide protection from heavy falling objects. These shoes shall conform to the requirements of reference 20-4, and be appropriately labeled per reference 20-4. General-purpose safety shoes (Chukka style) are available through normal supply channels. In cases where standard stock general-purpose safety shoes do not properly fit the employee, the Navy authorizes procurement from commercial sources.

(2) Employees shall wear the following special-purpose safety footwear, furnished for special hazards:

(a) Semi-conductive safety shoes are used to dissipate static electricity. To be effective, employees must use the shoes on conductive surfaces, such as wet concrete, metal decks, carbon-impregnated surfaces, wet terrain, conductive linoleum and conductive tiles. These brown shoes shall conform to Specification CID-A-A-50359 (Shoe, Conductive Series). This shoe was formerly procured under MIL-B-3794.

(b) Molder's "Congress" style safety shoes for protection while handling molten metal. The design prevents hazardous materials from falling inside the shoes and also allows quick removal of the shoes from feet, if necessary, to minimize injury. (MIL-S-82245, Shoe, Molders).

(c) Electrical hazard safety shoes, with a built-in protective toe box, to guard against electrical shock hazards when performing electrical work on live circuits not exceeding 600 volts. Employees should note, however, that these shoes only provide partial protection and should not ignore additional protective measures normally employed in these environments, (i.e., all personnel working on energized circuits shall insulate themselves from the ground (MIL-S-43860 Shoes, Electrical Hazards Protective)).

(3) Safety boots are general-purpose footwear items offering the same toe protection as the above safety shoes except in a boot designed for added support. The Navy does not approve these boots for use in areas where hazardous chemicals are used. (MIL-B-87067, Boot, Safety Series).

c. Appropriation and Distribution. The following procedures apply to the issue of protective footwear for military and civilian employees.

(1) Activities shall provide military personnel with standard stock safety shoes when required by their work. When safety shoes exhibit wear, such that safety protection is no longer afforded, the command shall provide standard stock safety shoes as organizational clothing (similar to coveralls or foul weather gear).

(2) The primary method for providing safety shoes to civilians is: issue of standard stock or reimbursement to individuals who buy their own shoes. A secondary method is to issue safety shoes that activities obtain under a local purchasing contract. Activities may select the method best suited to local conditions. Activities must absorb the cost of safety shoes within local operating funds (Defense Capital Working Fund (DCWF), research development, test, and evaluation

(RDT&E), operation and maintenance, Navy (O&M,N). Activities purchasing safety shoes under either local reimbursement or local contracting procedures shall ensure that they are appropriately labeled, and meet the requirements of reference 20-4. Activities shall determine the amount of the reimbursement by taking into consideration the usual cost in the local area for shoes of the type and quality specified in paragraph 2008b. Activities must document cases where medical considerations require specialized safety shoes (orthopedic safety shoes) with a written statement from a physician who treats foot disorders.

(a) Activities shall provide Navy U.S. civilian employees overseas (including foreign nationals) with safety shoes, as required, from standard stocks, unless their cognizant headquarters command grants specific approval for alternate purchasing methods. Foreign national indirect hires, being provided safety shoes under an existing labor agreement, will continue to use the reimbursement procedures contained in the applicable agreement.

(b) Activities shall provide non-appropriated funded civilian employees with safety shoes under provisions of this policy except that the funding and paying sources for required safety shoes will be non-appropriated.

2009. Hand Protection

a. Activities shall select, provide and require appropriate hand protection whenever employees' hands are exposed to, or are likely to be exposed to, such hazards as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasion; punctures; chemical irritants; thermal burns; and harmful temperature extremes.

b. Activities shall base selection of hand protection on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use and the hazards and potential hazards identified.

2010. Electrical Protective Devices

Navy activities shall provide appropriate rubber protective equipment for electrical workers who perform work on energized or potentially energized electrical systems. Equipment shall conform to references:

American Society for Testing and Materials (ASTM) D 120-87, Specifications for Rubber Insulating Gloves

ASTM D 178-88, Specification for Rubber Insulating Matting

ASTM D 1048-88, Specification for Rubber Insulating Blankets

ASTM D 1049-88, Specification for Rubber Insulating Covers

ASTM D 1050-90, Specification for Rubber Insulating Line Hose

ASTM D 1051-87, Specification for Rubber Insulating Sleeves.

2011. Training

a. Activities shall provide training to each employee who is required to use PPE to include at least the following:

- (1) When PPE is necessary.
- (2) What PPE is necessary.
- (3) How to properly don, doff, adjust and wear PPE.
- (4) The limitations of the PPE.
- (5) The proper care, maintenance, useful life and disposal of the PPE.
- (6) Ability to recognize that defective or damaged PPE shall not be used.

b. Each affected employee shall demonstrate an understanding of the training specified in paragraph 2011a, and the ability to use PPE properly before being allowed to perform work requiring the use of PPE.

c. When a supervisor has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by paragraph 2011b above, the supervisor shall ensure retraining is accomplished for each such employee. Circumstances where retraining is required include, but are not limited to, situations where:

- (1) Changes in the workplace render previous training obsolete
- (2) Changes in the types of PPE to be used render previous training obsolete
- (3) Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill.

d. Activities shall maintain documentation verifying that each affected employee has received and understands the required training. Documentation shall be in accordance with paragraph 0605 of chapter 6.

2012. Responsibilities

Commanders, Commanding Officers, and Officers in Charge shall include and enforce the following provisions concerning PPE:

a. Ensure the evaluation of workplaces, including applicable hazardous material data and industrial hygiene survey reports, to determine PPE requirements. Qualified safety and occupational health personnel shall perform these evaluations. Commands shall use the results of these evaluations to designate appropriate work conditions and work areas as requiring PPE. The command shall establish effective means of communicating these PPE requirements to employees.

- b. Ensure that PPE conforms to NAVOSH standards.
- c. Arrange for appropriate medical evaluations to determine worker capability to perform assigned tasks using the prescribed PPE.
- d. Train personnel in the selection, use, inspection and care of PPE required for their work situations and maintain records of such training.
- e. Ensure protective equipment worn by personnel fits properly.
- f. Ensure designated personnel perform periodic equipment inspection, cleaning, disinfection and maintenance.
- g. Provide proper equipment storage to protect against environmental conditions that might degrade the effectiveness of the equipment or result in contamination during storage.
- h. Ensure compliance with the prescribed use of PPE.
- i. Identify non-use, misuse or malfunction of PPE that results, or may result, in injury or occupational illness to Navy personnel.

Chapter 20

References

- 20-1. Title 29 Code of Federal Regulations (CFR) 1910 Subpart I, Appendix B, Non-mandatory Compliance Guidelines for Hazard Assessment and Personal Protective Equipment, latest revision, (NOTAL)
- 20-2. American National Standards Institute (ANSI) Z87.1-1989 (R-1998), American National Standard Practice for Occupational and Educational Eye and Face Protection, (NOTAL)
- 20-3. American National Standards Institute (ANSI) Z89.1-1997, American National Standard for Industrial Head Protection, (NOTAL)
- 20-4. American National Standards Institute (ANSI) Z41-1999, American National Standard for Personal Protection-Protective Footwear, (NOTAL)